

Distribution and Population Constitution of *Drosophila* in South East Asia and Oceania, IV.

New and unrecorded species of *Drosophilidae*
in Solomon Islands

by

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Collecting trips were twice in Southeast Asia and Oceania from June 25 to August 31 in 1972, and June 22 to August 31 in 1973, to explore the drosophilid flies. A lot of specimens of drosophilid flies were collected by net-sweeping and exposing fermenting banana baits from two tropical islands, Guadalcanal and New Georgia, Solomon Islands, from August 1 to August 9, 1973 with Dr. Eizi Momma.

They represent twelve species belonging to the *Drosophilidae* with five genera including a new species in subgenus *Hirtodrosophila*, genus *Drosophila*. These new flies were captured by a sweeping-net over on small brownish fungi which grew on some fallen trees at the Honiara Rifle Range, Honiara, Guadalcanal.

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All type specimens are deposited at the Biological Laboratory, Sapporo University.

Family Drosophilidae

Subfamily Steganinae

Genus *Leucophenga* Mik

Subgenus *Leucophenga* Mik

- 1) *Leucophenga gibbosa* (de Meijere), 1914, Tijdschr. Ent. 57 : 264.
Specimen examined: ♂, Aug. 6, 1973, Munda, New Georgia
(Takada).

Subfamily Drosophilidae

Genus *Drosophila* Fallén

Subgenus *Drosophila* Fallén

- 2) *Drosophila pararubida* Mather, 1961, Univ. Qd Pap. 1 : 251.
Specimens examined: 6 ♂♂, 7 ♀♀, Guadalcanal, Aug 2,
1973 and 2, New Georgia, Aug. 6, 1973 (Takada).
- 3) *Drosophila quadrilineata* de Meijere, 1911, Tijdschr. Ent.
54 : 396.
Specimens examined: 2 ♂♂, Guadalcanal, Aug. 4, 1973
(Takada).

Subgenus *Hirtodrosophila* Duda

- 4) *Drosophila menisigra* Bächli, 1973, Mitt. Zool. Berl., 49 : 309.
Specimens examined: 2 ♂♂, 2 ♀♀ Guadalcanal, Aug. 3,
1973 (Takada).
- 5) *Drosophila seminigra* Duda, 1926. Suppl. Ent. 14 : 68.
Specimens Examined.: 2 ♂♂, Guadalcanal, Aug. 3, 1973
(Takada).
- 6) *Drosophila solomonica* Takada n. sp. (Fig. 1)
D. (Hirtodrosophila) solomonica n. sp., Takada 1979. Zool.
Mag., 88, 4 : 673, at the 50th Annual Meeting, Zool Soc. of
Japan (in Japanese).

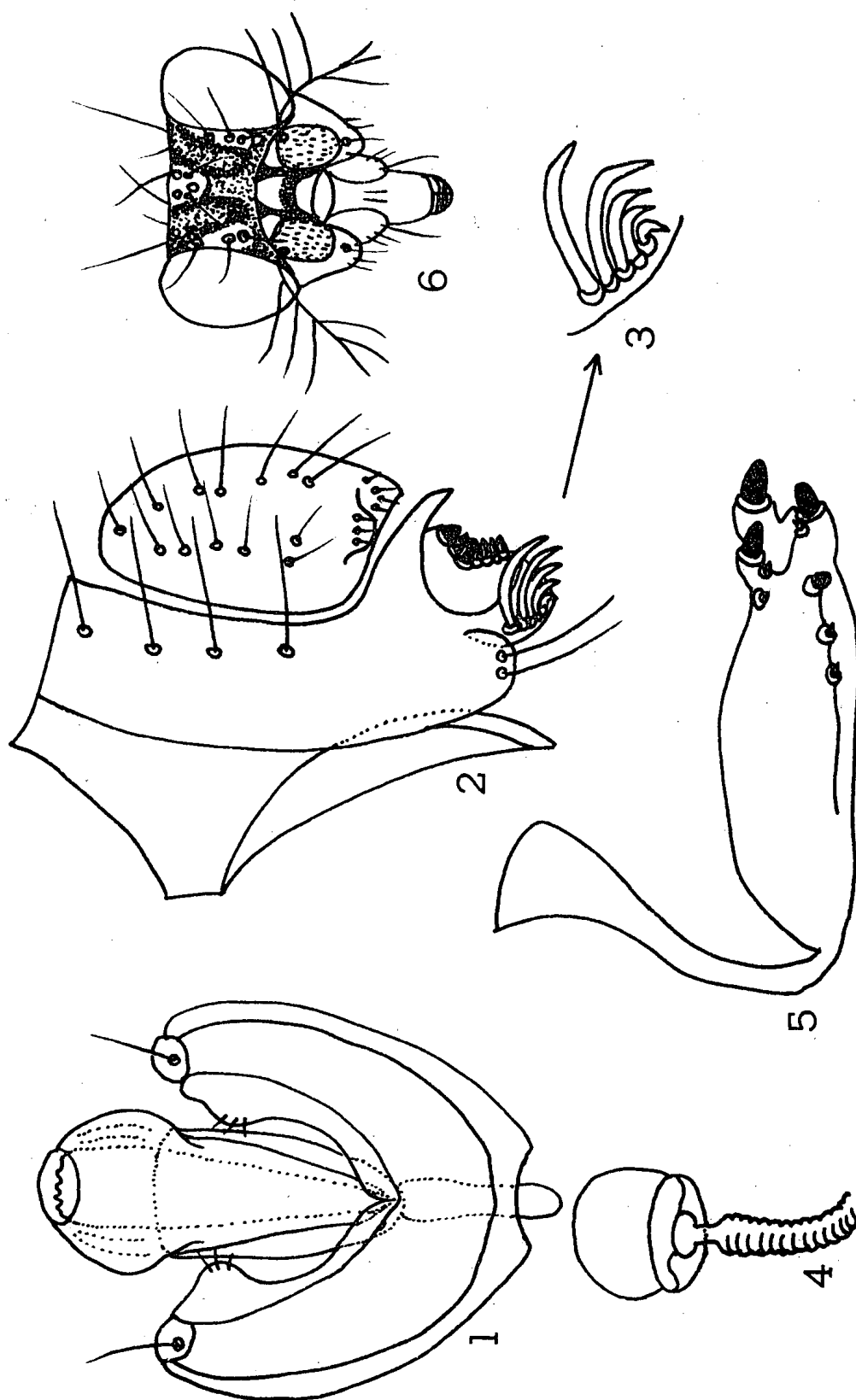


Fig. 1 *Drosophila* (*Hirtodrosophila*) *solomonica* Takada, n. sp.
1. Phallic organ. 2. Periphallic organs. 3. Caudal margin of epandrium with
semitransparent tape-like process. 4. Spermatheca. 5. Egg-guide

Male & Female. Body about 1.0-1.3 mm, wing length about 1.4 mm, small species. Front, mesonotum, scutellum and humerus coffee brown, front somewhat velvety. Eye deep purplish red with piles. The third joint of antenna with grey and long hairs anteriorly. Arista with three dorsal and one ventral branches besides a large fork. Ocellar triangle brown. Anterior reclinate orbital bristle one-third posterior reclinate orbitals, half of proclinate bristle. Proclinate orbitals inside others, anterior reclinate nearer to proclinate than to posterior reclinate. Carina high, broad. Cheeks yellow. Palpus yellow with a apical stout seta. Vibrissa long and black, other orals fine. Acrostichal hairs in six rows. Thoracic pleura, abdomen, legs and halteres are yellow.

Wings hyaline, R 2 + 3 straight and short, R 4 + 5, and M parallel; Costal-index about 0.8; 4 V-index about 2.6; 4 C-index about 2.3; 5 x-index about 3.0 and AC-index about 4.0. Cl-bristles two, subequal. C3-fringe on basal half.

Periphallic organs: Pale yellow. Epandrium pubescent, truncate below, posterior margin with few bristles, narrowly elongated below at heel, toe rounded with two stout bristles, without invagination at the insertion of surstylus. Surstylus broad, crescent, distally concaved and with about seven pointed black teeth, caudal margin of epandrium *with about seven semitransparent tape-like bristles*. Cercus oval, pubescent and hairy, *undermargin with thmb-shaped process*.

Phallic organs: Pale yellow. Adeagus pale yellow, slender, apically swollen and membraneous. Apodeme of aedeagus pale yellow, narrow and short. Anterior paramere elongate, apparently fused to ventral fragma, with a few apical sensilla. Hy-

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pandrium small and rounded, with submedian spine. Ventral fragma V-shaped without median process. Phallosomal index about 3.0.

Egg-gude: Pale yellow, spindle-shaped, apically tridently, ending on a black stout tooth, respectively. Basal isthmus long and broad.

Holotype: Male, The Honiara Rifle Range, Honiara, Guadalcanal, Solomon Is., Aug. 3, 1973 (Takada).

Allotype: Female, collected together with the holotype.

Paratypes: 2 males and 2 female, collected together with the holotype.

Collecting site: Small brownish fungi on a fallen tree. Same fungi also attracted two other species of *Hirtodrosophila*, *D. (H.) seminigra* Duda, and *D. (H.) menisigra* Bächli, and with *Mycodrosophila amabilis* (de Meijere).

Relationships: Closely allied to *D. (H.) seminigra* Duda, 1926, but differs from it in shapes of phallic and periphallitic organs and egg-guides (Bächli, 1973).

Slide No. of genitalia: SGHZ-5, -6, -9 (Sapporo University)

Subgenus *Sophophora* Sturtevant

- (7) *Drosophila pallidosa* Bock & Wheeler, 1972, Univ. Tex. Publ., 7213: 38.

Specimens examined: Many, Aug. 2-4, 1973, Guadalcanal (Takada), and Aug. 5-9, 1973, New Georgia (Takada).

Front rather broad, ocellus ruby colors and adomen yellow.

- 8) *Drosophila pseudoananassae* Bock, 1971, Univ. Tex. Publ., 7103: 274.

Specimens examined: Many, Aug. 2-4, 1973, Guadalcanal (Takada) and Aug. 5-9, 1973, New Georgia (Takada).

Genus *Lissocephala* Malloch

- 9) *Lissocephala metallescens* (de Meijere), 1914, Tijdschr. Ent. 57 : 265.

Specimen examined: ♂, Aug. 2, 1973, Guadalcanal (Takada).

Genus *Mycodrosophila* Oldenberg

- 10) *Mycodrosophila amabilis* (de Meijere), 1911, Tijdschr. Ent. 54 : 405.

Specimens examined: 6 ♂, 4 ♀, Guadalcanal, Aug 3, 1973 (Takada).

- 11) *Mycodrosophila gressitti* Wheeler & Takada, 1964. Insect of Micronesia, 14, 6 : 204.

Specimens examined : ♂ ♀, Guadalcanal, Aug. 3, 1973 (Takada). Body length about 1.5 mm.

Genus *Sphaerogastrella* Duta

- 12) *Sphaerogastrella javana* (de Meijere), 1911, Tijdschr. Ent. 54 : 422. (Fig. 2)

Specimens examined : ♂, Aug. 2, 1973, Guadalcanal (Takada) and 4 ♀, Aug. 5, 1973, New Georgia (Takada).

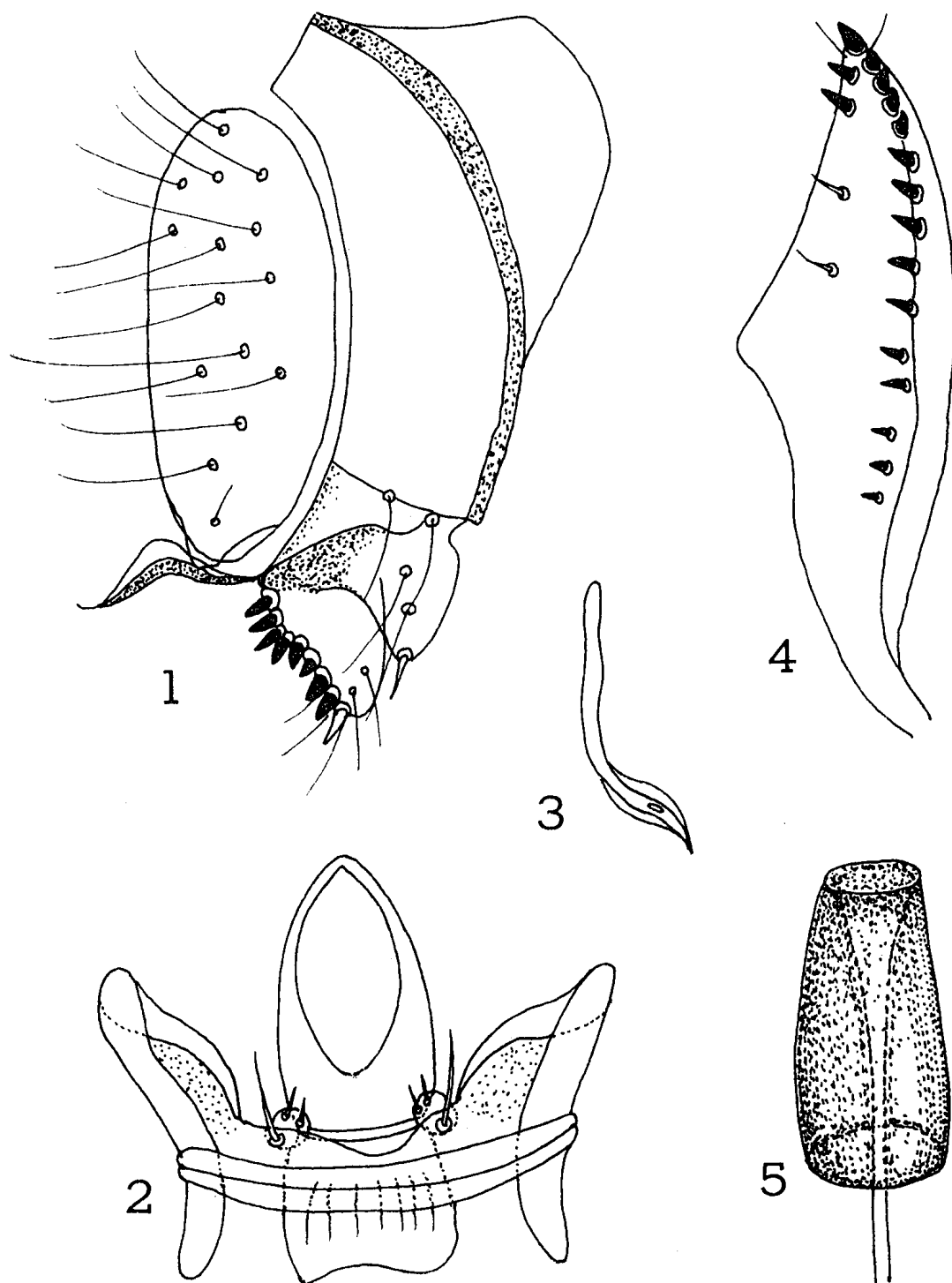


Fig. 2 *Sphaerogastrella javana* (de Meijere)

1. Periphallic organs. 2. Phallic organs. 3. Ejaculatory apodeme. 4. Egg-guide. 5. spermatheca.